### City of Memphis

Annual Report October 1, 2012 through September 30, 2013

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering such information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Bobby D. Allen, P.E.

11-21-13 Date

# **Annual Report**

## October 1, 2012 through September 30, 2013

On September 20, 2012, the United States District Court for the Western District of Tennessee entered a Consent Decree between the City of Memphis (the City) and the United States, the State of Tennessee, and the Tennessee Clean Water Network.

To fulfill the reporting requirements defined in Paragraph VIII.26. of the Consent Decree, the City has prepared this Annual Report, which includes the following information:

- A summary of Management, Operations, and Maintenance (MOM) programs implemented or modified pursuant to the Consent Decree, including a comparison of actual performance with any performance measures that have been established.
- A trend analysis of the number, volume, duration, and cause of sanitary sewer overflow (SSO) events for the previous twenty-four month period.

#### 1. Summary of MOM Programs

The Consent Decree, as shown in Paragraph V.10, describes the following MOM Programs that are required to be developed and/or implemented by the City. These include the following:

- Sewer Overflow Response Plan (SORP)
- Fats, Oil, and Grease (FOG) Management Program
- Lift Station and Force Main Operations and Maintenance (O&M) Program
- Gravity Sewer System 0&M Program
- Inter-Jurisdictional Agreement Program
- Continuing Sewer Assessment Program
- Infrastructure Rehabilitation Program

At this time, only two of these programs, the SORP and the FOG Management Program, have been approved and are being implemented. Performance measures described in those plans are presented below, along with the actual performance over the reporting period for those items.

- Number of Notice of Violations (NOVs) issued to failure to comply with Food Establishment Wastewater Discharge permits: 171
- Number of NOVs per 100 food establishments: 6.0
- Number of FOG and "Can the Grease" door hangers distributed: 830
- Number of can lids distributed as part of the "Can the Grease" program: 1300

- Number of food establishment grease removal equipment inspections: 4153
- Number of follow-up inspections: 321
- Number of grease-related SSOs: 387

Note that grease-related SSOs are those identified at the time of the SSO as related to grease, although additional causes, such as roots or an offset joint, may also have contributed to the overflow.

The Lift Station and Force Main O&M Program, the Gravity Sewer O&M Program, the Inter-Jurisdictional Agreement Program, and the Continuing Sewer Assessment Program have been submitted in accordance with the Consent Decree, and the City is awaiting comments.

#### 2. Sanitary Sewer Overflow Trend Analysis

As required in the Consent Decree, a trend analysis of SSO events was performed which includes three graphs. Figure 1, located at the end of this report, shows monthly SSO events as a result of the following causes:

- Blockage
- Break
- Flooded
- Force Main Failure
- Pump Station Failure
- Other

As shown in the figure, the majority of SSOs were the result of blockages within the system. The blockage may be the result of roots, debris, grease, other items, or combinations thereof.

Figure 2, also located at the end of this report, shows the monthly SSO volumes for the previous twenty-four months, reported in million gallons. Where estimated volumes were unknown, the median volume of the remaining SSOs, 1080 gallons, was assumed for the purposes of this analysis.

Figure 3, also located at the end of this report, shows the monthly SSO duration during the previous twenty-four month period. The durations shown are a summation of the total amount of time overflows were occurring within the system at all overflow locations. This data is provided in the units of overflow equivalent hours. For instance, if two overflows related to blockages occur concurrently for two hours each, the overflow duration for that day is four overflow equivalent hours. As with SSO volumes, a few SSO records may not have included durations. For these overflows, the median duration of the remaining SSOs, 2 hours, was assumed for the purposes of the analysis.

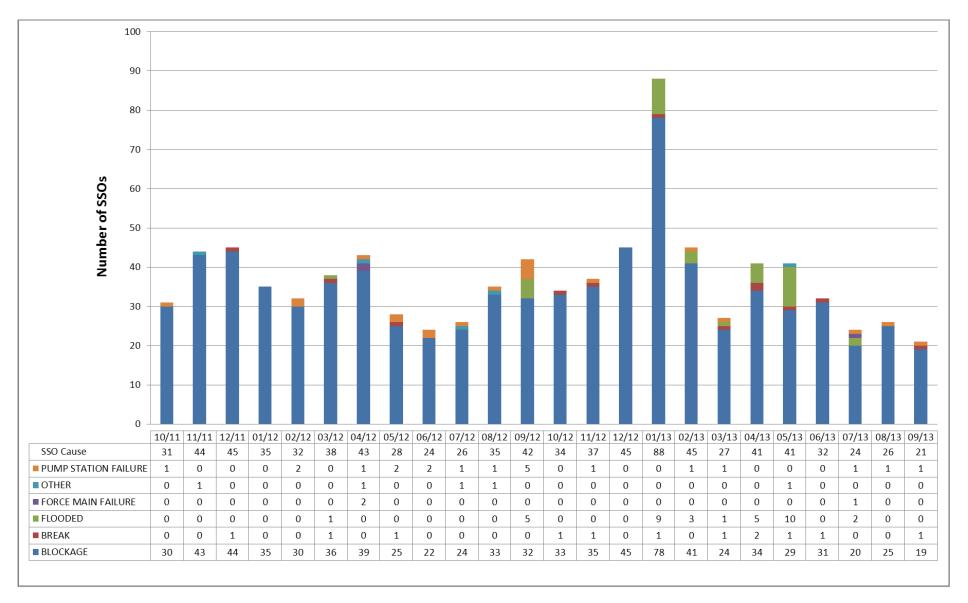


Figure 1 – SSOs by Cause

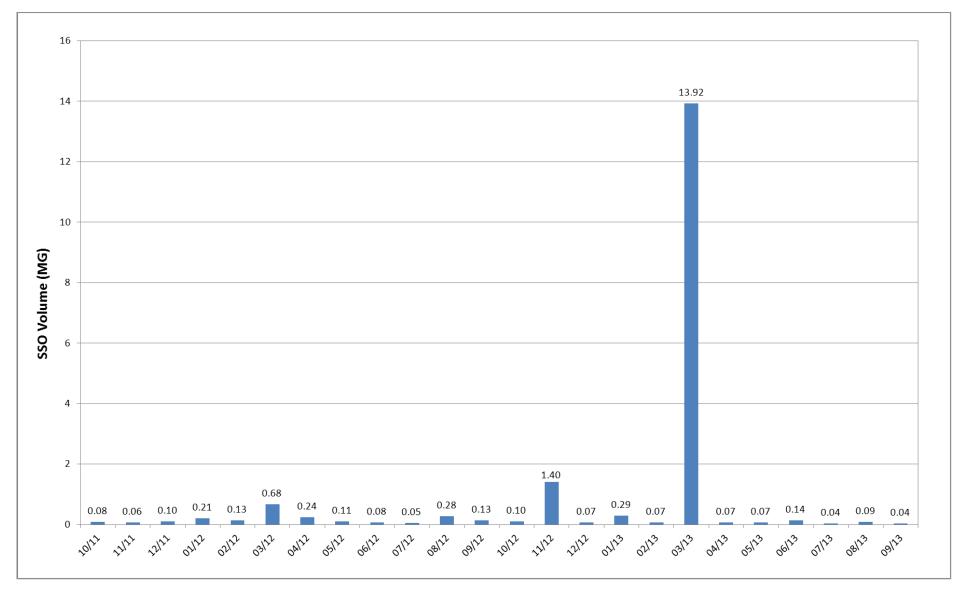


Figure 2 – Monthly SSO Volume

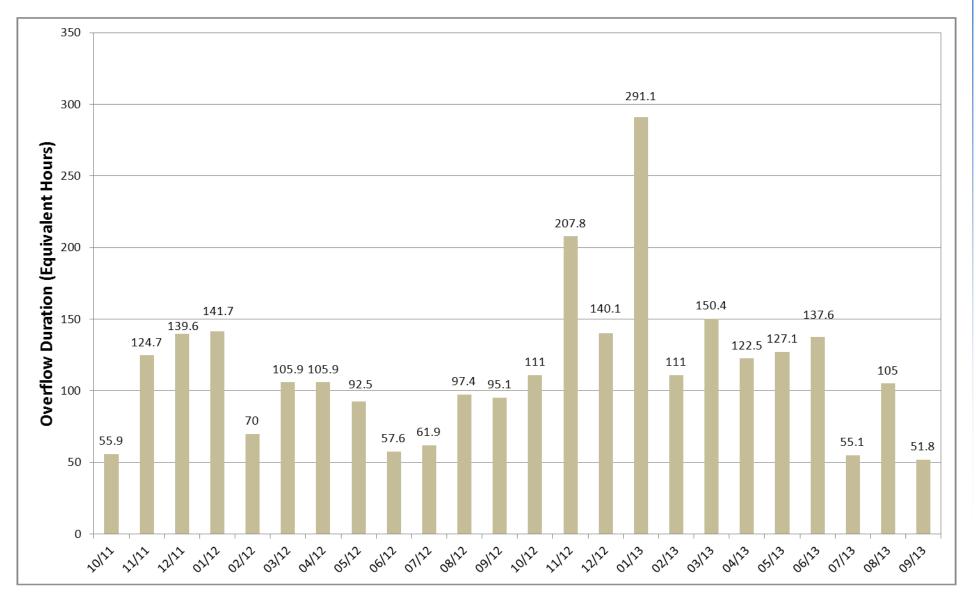


Figure 3 – Monthly SSO Duration